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would come under such a ruling, before my report is formulated.

In view of the foregoing premises, I respectfully request zoologists in different groups to call my attention to as many instances of this kind as possible, with which they are acquainted in their different specialties. Further, since the arguments on both sides of the problem appear to be almost equally valid, it does not seem impossible that the final decision will have to be based upon an arbitrary choice between the two possible rulings, and on this account I am desirous of obtaining all possible arguments on both sides as they occur to different zoologists, and also any personal views based upon convenience or inconvenience, or other grounds, which may be held by different colleagues.

I will hold the case open at least until September 1, for the presentation of arguments by any persons who may desire to submit their views.

C. W. STILES,

Secretary of the Commission

April 4, 1911

SCIENTIFIC BOOKS

Diseases of Economic Plants. By F. L. STEVENS, Ph.D., and J. G. HALL, M.A. New York, The Macmillan Co. 1910. Pp. 313, 214 figures. \$2.00 net.

The authors of this work have sought to produce a book on plant pathology "for those who wish to recognize and treat diseases without the burden of long study as to their causes." To this end "technical discussion is avoided in so far as is possible," and "no consideration is given to the causal organism except as it is conspicuous enough to be of service in diagnosis, or exhibits peculiarities, knowledge of which may be of use in prophylaxis." Non-parasitic diseases are omitted, except a few of the most conspicuous.

The volume opens with short chapters on the history of plant pathology, the damage done by plant diseases, their symptoms, prevention or cure, public plant sanitation, fungicides, spraying machinery, cost of spraying, profits from spraying, soil disinfection and general diseases.

The greater part is given to brief descriptions of plant diseases due to bacteria or fungi with suggestions regarding their prevention or cure. For this purpose a grouping by hosts is adopted; viz., pomaceous fruits, drupaceous fruits, small fruits, tropical fruits, vegetable and field crops, cereals, forage crops, trees and timber and ornamental plants. This is a commendable feature for a practical reference book as some such classification is much to be preferred to an arrangement according to the botanical relationship of the parasite.

To present in a popular way a highly technical subject and to retain accuracy and thoroughness is a much harder task than writing for professional readers. Diverse opinion exists as to the most effective method of presenting such a subject. It is, therefore, to be expected that many readers will differ with our authors. Their attention will first be arrested by the general use of *ose* as an ending for the generic name of the causal fungus to form a common name for the disease. Decay due to blue mold becomes "penicilliose"; dry rot of sweet potatoes, "lasiodiplodiose"; wilt of cotton, "fusariose," etc. There are many arguments against such names, and it does not seem wise to attempt to introduce them into a popular book before they have been accepted by plant pathologists.

Some readers will not approve the omission of all technical details relating to the nature and life history of fungi, holding them to be as essential to pathology as mathematics to a treatise on engineering. The short chapter on fungi in the appendix is not adequate nor is it correlated with the chapter on pathology.

It is to be regretted that it was found necessary to limit the book to diseases due to fungi and bacteria, especially since the causes of diseases are not given prominence in the text. The lay reader will be confused by the omission of the physiological fruit spot of the apple, while the similar but less important fungus fruit spot is discussed. Potato tip-burn is given four lines while the no more important potato scab is allotted four pages of text. The wilt and dieback of the orange are omitted as is the curly top of beet, one of the

two most important maladies of that crop. That the viewpoint of the author is that of parasitology rather than pathology is further shown by the omission of any discussion of the physiology of disease. The very brief appendix chapter on physiology has no relation to the rest of the book.

From the standpoint of the lay reader it is feared that the space devoted to remedial measures is in most cases not sufficient, nor the recommendations as definite and specific as the needs of practise require.

The large number of minor diseases mentioned without adequate description will also confuse the inexperienced student.

Some more serious errors occur. The reviewer knows of no warrant for the statement on page 445 that *Microsphaera alni* practically destroys the pecan crop in the south in certain years. This fungus is one of the least harmful of the pecan parasites. Stigmonose of carnation is not mentioned while there is a reference to a more obscure bacterial disease. The discussion of mosaic disease of tobacco and tomato would be cleared by including Woods's results.¹

Absurdly large losses are attributed to cotton anthracnose in Georgia, and the injury to tomatoes from *Phytophthora* is overstated. The description of Bordeaux injury is incorrect, as is also the statement that blossoms are killed and the lives of bees endangered by spraying with Bordeaux.

All workers in plant pathology should possess this book and it will be useful to farmers, fruit growers and all who are interested in growing plants. There has long been urgent need for a treatise on American plant diseases adapted to general readers, in which the widely scattered and often unobtainable recent publications should be summarized. This book is intended to meet this need.

W. A. ORTON

Preliminary Report on the Peat Deposits of Florida. By ROLAND M. HARPER. Third Ann. Rept. Fla. Geol. Surv., 1910, pp. 197-375, pl. 16-28, tf. 17-30.

¹ Bulletin 18, Bureau of Plant Industry, 1902.

The state of Florida because of its flatness, its abundant ponds, lakes and swamps, its ample, well-distributed rainfall and the absence of sediment-laden streams, affords exceptionally favorable conditions for the formation of peat, and the present report is a monumental disproof of that ancient and persistent fallacy that peat is formed only in high latitudes.

For purposes of discussion the state is divided by the author into fourteen more or less natural divisions based chiefly upon topography and vegetation, and these are shown on a sketch map. The varied swamps of the state are elaborately classified, more than thirty types being enumerated and described in more or less detail. The more common plants of each are listed in the order of their abundance.

A few pages are devoted to fossil peat. Numerous analyses of peat samples are given and there is a chapter upon the utilization of peat. This is followed by a reliable systematic catalogue of Florida peat-forming plants and the report is concluded by a bibliography and a good index.

The report, as a whole, is well done and excellently illustrated by 13 plates and 14 text-figures. While it is confessedly superficial, it should be remembered that the economic development of Florida at the present time would hardly warrant the investment of the large sum of money necessary for an exhaustive study of its peat deposits. From the commercial view point the present report is surely ample enough to point the way to a utilization of the more important peat deposits and those which are favorably situated for exploitation.

Dr. Harper approaches the subject from the view point of the plant geographer, and it is this aspect of the report which has the most scientific merit and which will occasion the widest interest. A more intensive study and a much fuller treatment of the flora would have been desirable from the standpoint of the botanist, but for the reasons mentioned above such a study was not practicable.